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STRUCTURAL DAMPER

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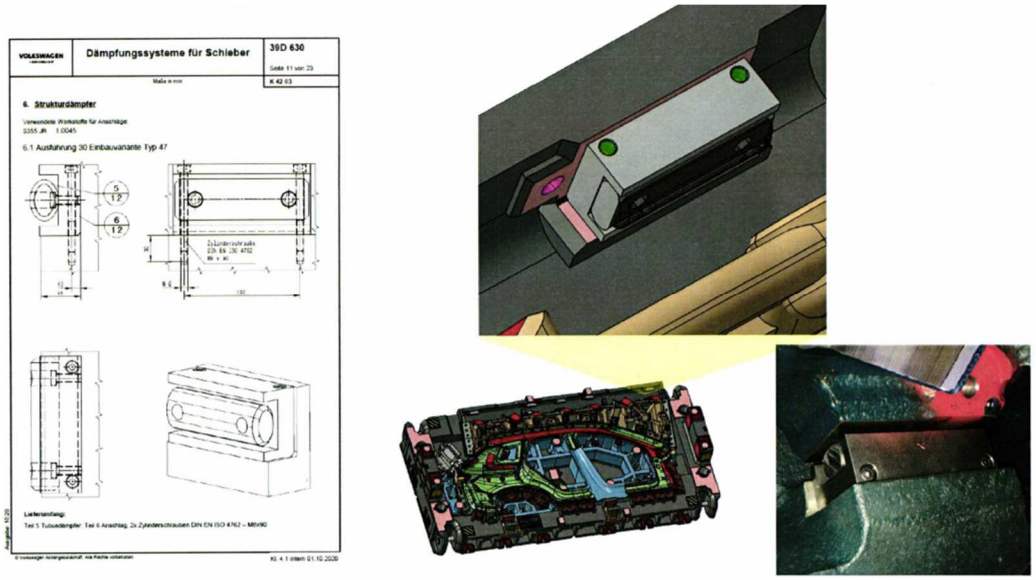
STRUCTURAL DAMPER

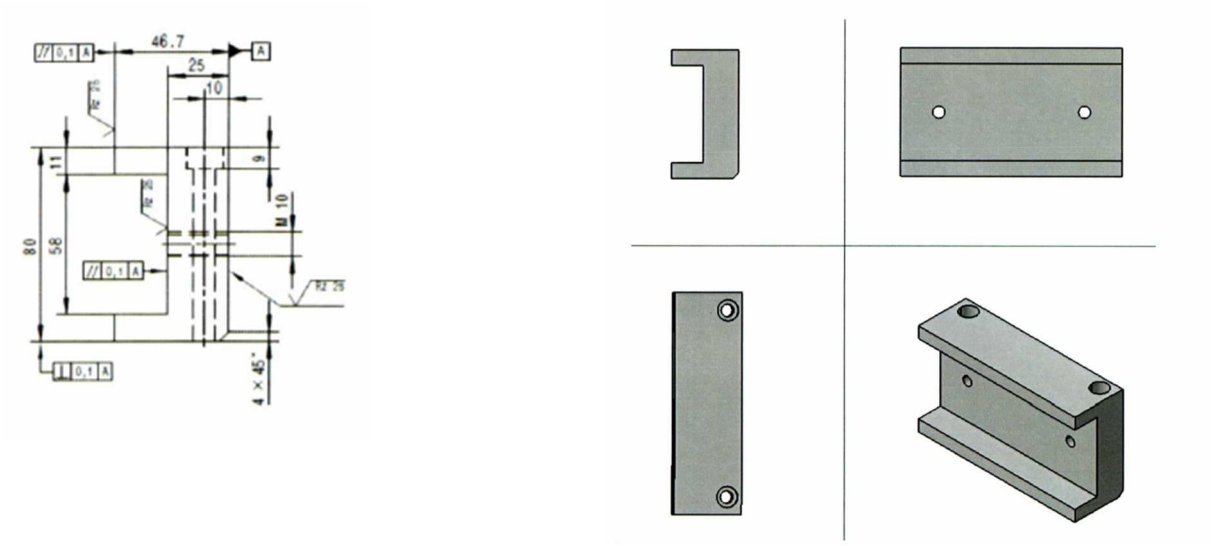
Technical task:
In press molds for body parts, sliders must be damped on their way to their rest position due to high dynamic forces. The standard part "structural damper" according to 39D 630/30+31 fulfils this function.



Initial situation:
There have been no geometrical adjustments since standardization. The aim is to carry out optimizations and thus reduce costs.

Solution:

Manufacture

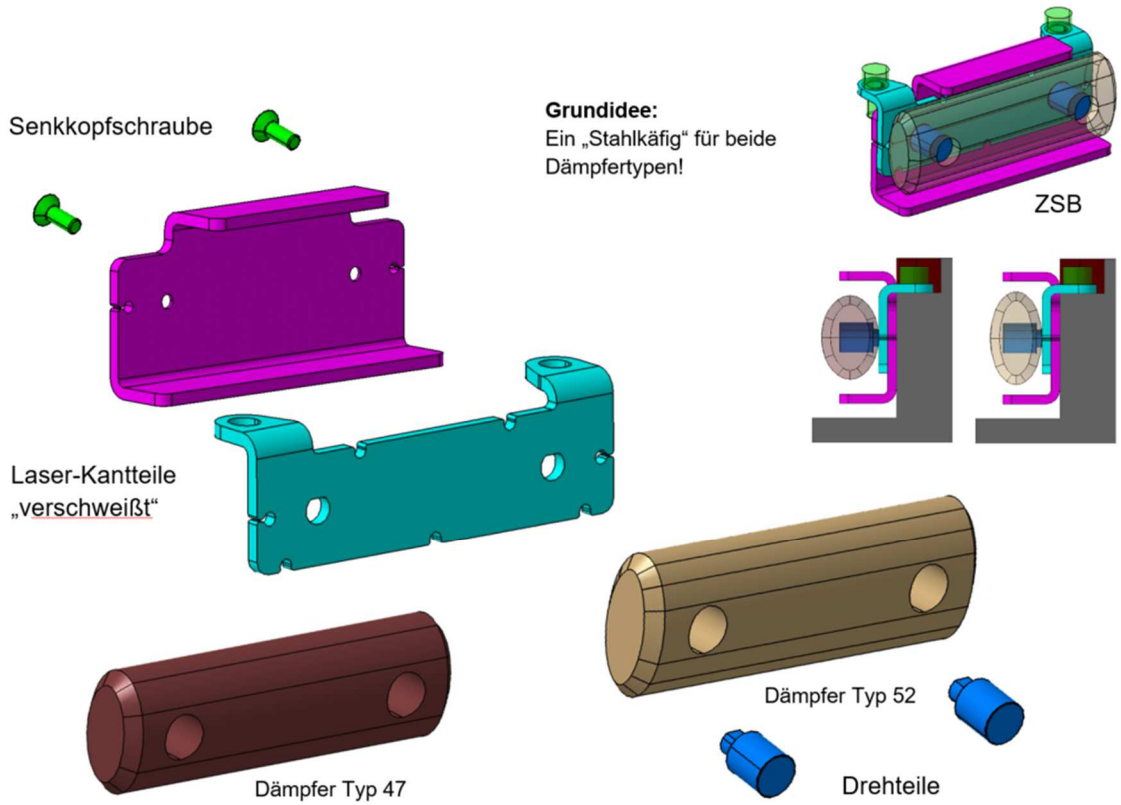


Machining only possible in several setups:

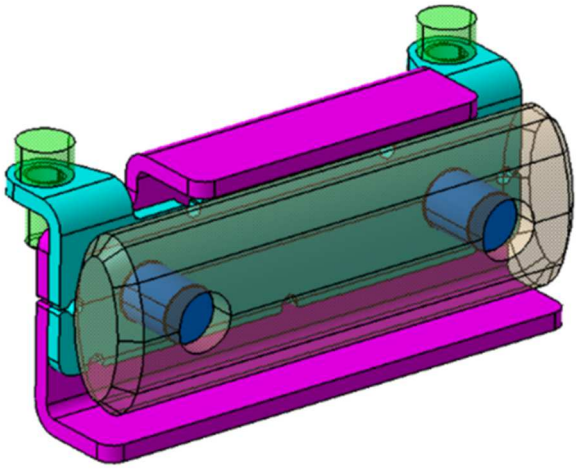
- Sawing
- 1st clamping
- 2nd clamping
- …
- Deburring

⇨ No automation possible or reasonable

Details



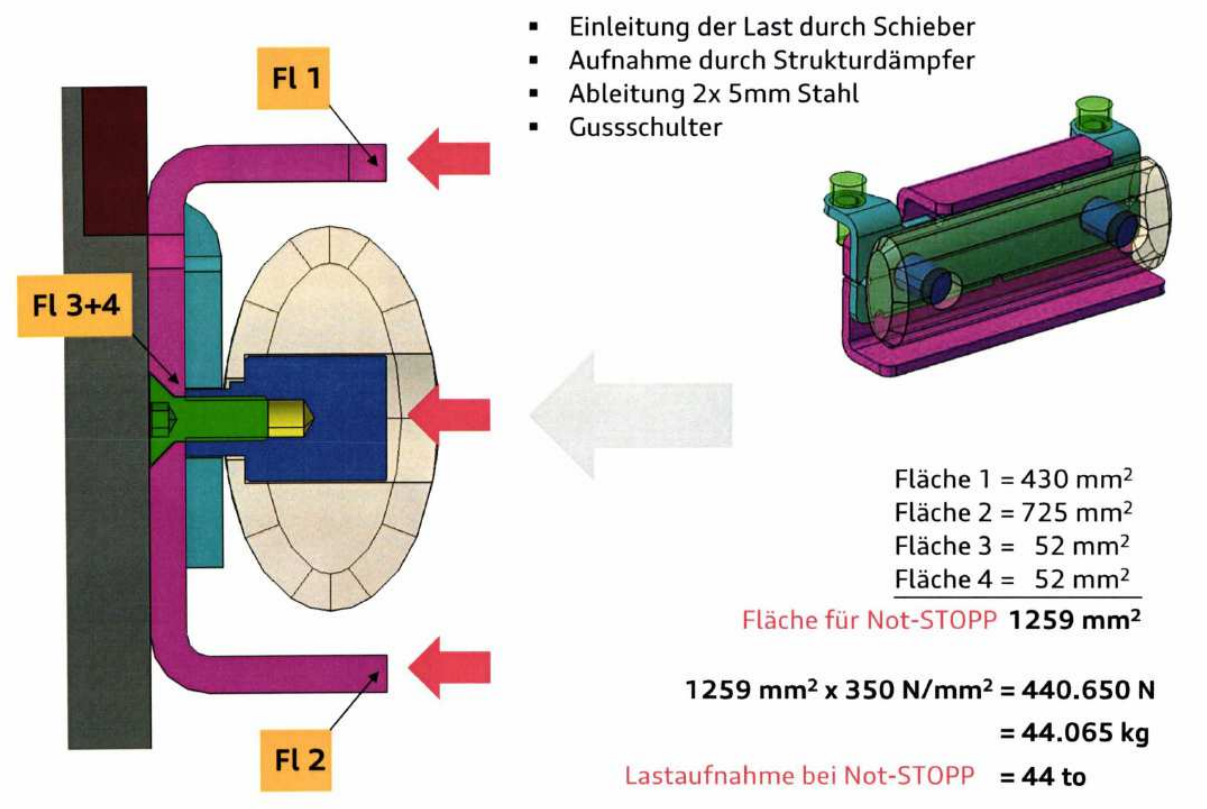
The new structure damper



Production of the individual parts by modern, efficient and partly fully automated manufacturing processes:

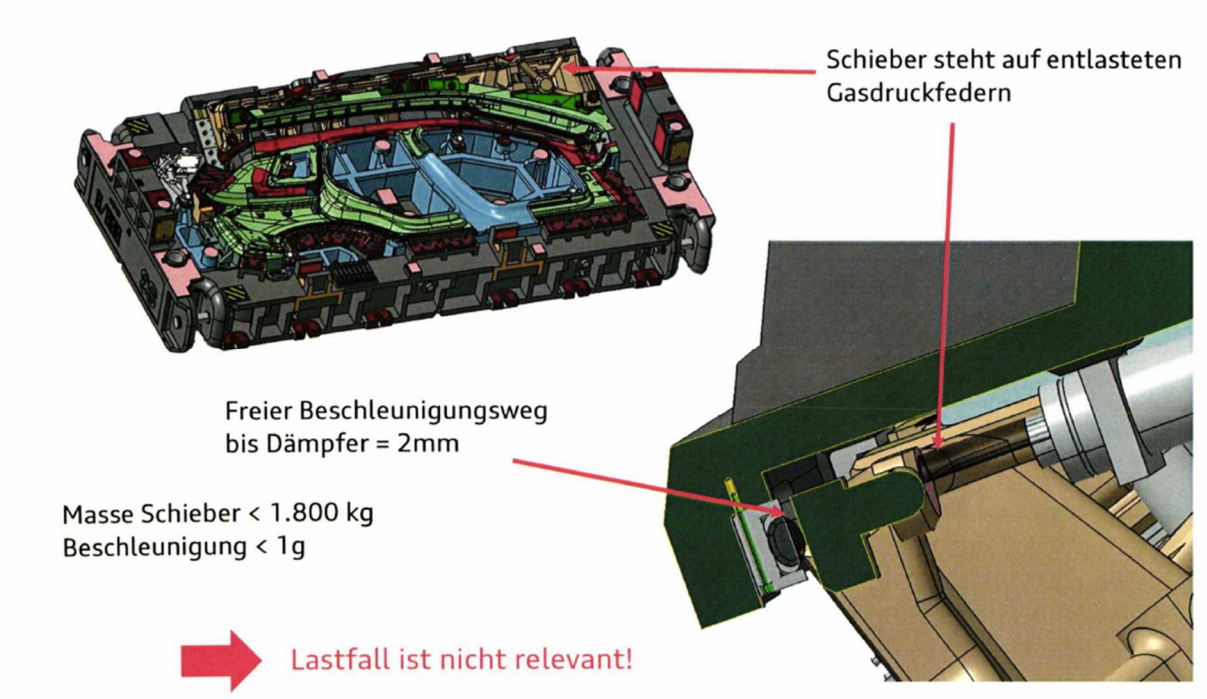
- Laser edged parts
- Turned parts "off the shelf

Joining by manual or automated welding



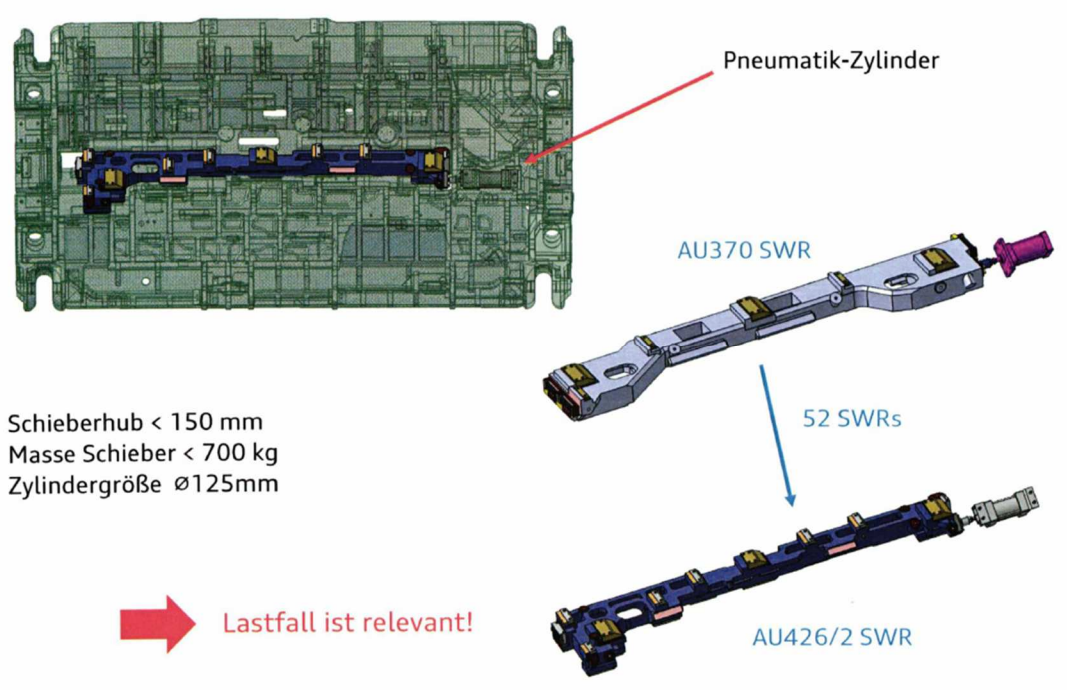
Load case analysis

1. Turning of the uncovered WKZ upper/lower side



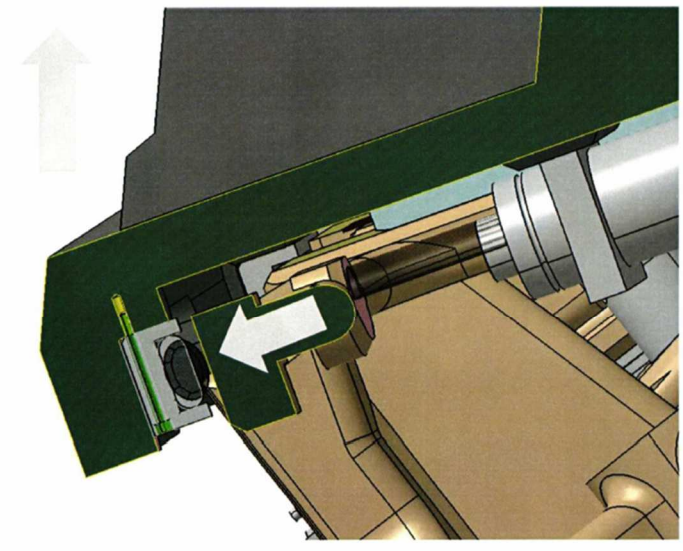
Load case analysis

2. Lifting movement by pneumatic cylinder



Load case analysis

3. Press return stroke in production press



Stössel bewegt sich aus dem unteren Totpunkt nach oben.

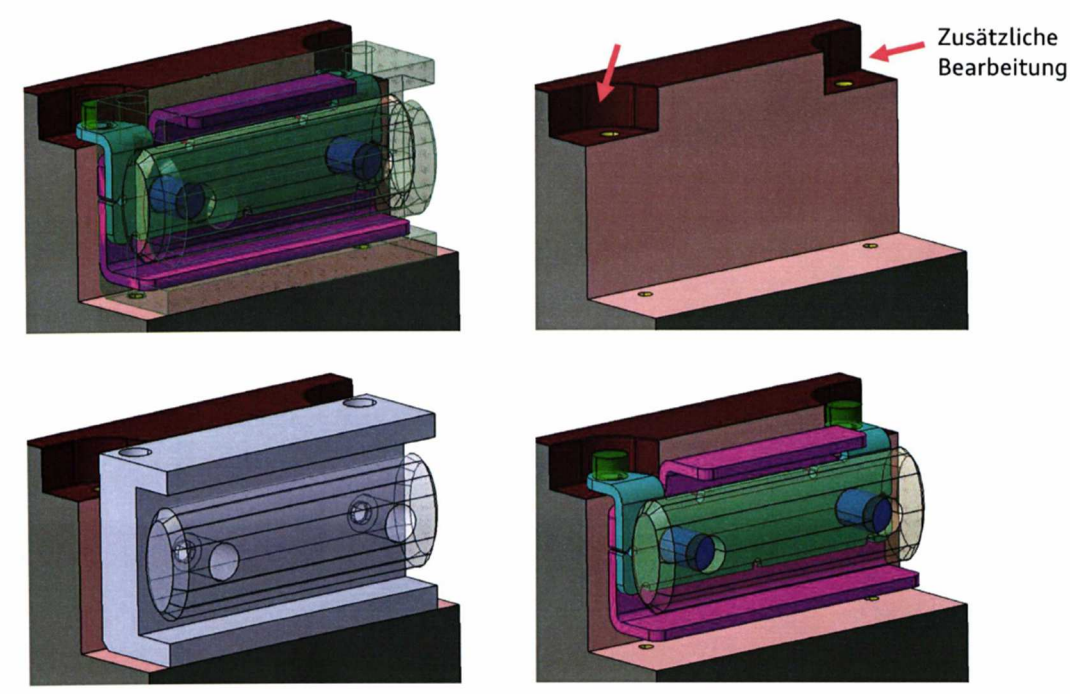
GDF im Schieberbett sorgen für Kontakt zwischen Schieber und Treiberflächen im Unterteil.

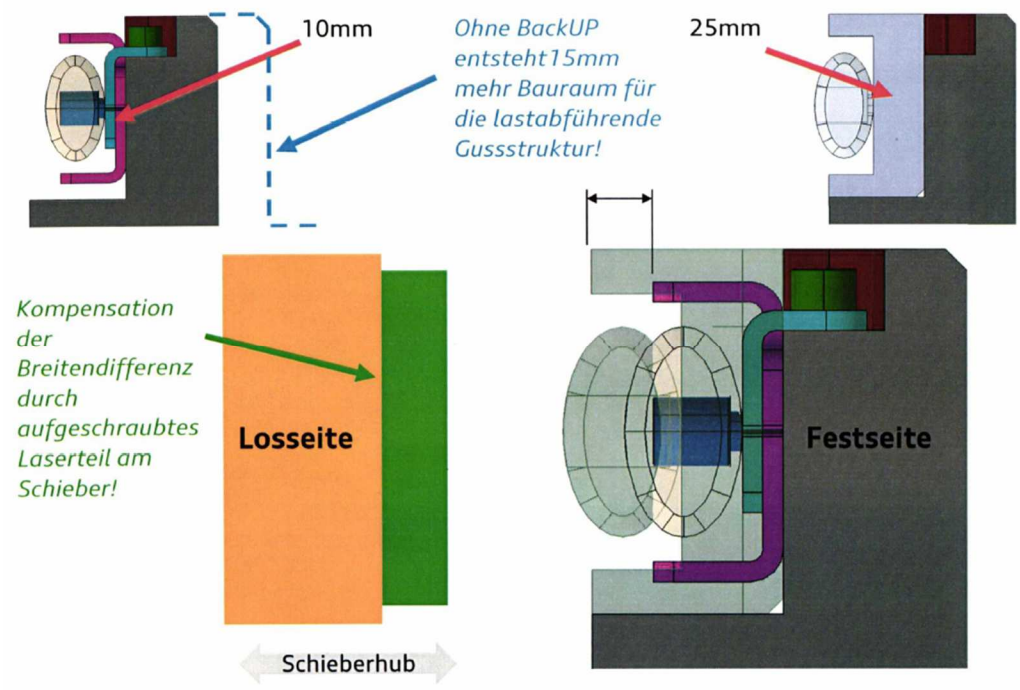
Relevant ist der Zeitpunkt beim Abheben des Schiebers vom Treiber im Unterteil.

Masse Schieber < 1.800 kg
Beschleunigung > 3g

Essentieller Lastfall!

100% backup solution for implementation in new projects





Advantages:

- Cost optimization of the assembly (laser edged parts, simple turned parts)
- Variant reduction
- Option for DIY / training workshop